

PATENTS

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Marc WAGNER et al.

Serial No. (unknown)

Filed herewith

HEAT EXCHANGER WITH MULTIPLE
EXCHANGER BLOCKS WITH UNIFORM
FLUID DISTRIBUTION SUPPLY LINE
AND REBOILER-CONDENSER COMPRISING
SUCH AN EXCHANGER

PRELIMINARY AMENDMENT

Commissioner for Patents

Washington, D.C. 20231

Sir:

Prior to the first Official Action and calculation of the filing fee, please amend the above-identified application as follows:

IN THE CLAIMS:

Amend claim 5 as follows:

--5. (Amended) Heat exchanger according to Claim 2, characterized in that the grating (30) has several juxtaposed regions each having one same degree of perforation on their surfaces, and respective degrees of perforation that differ from one region to an adjacent region.--

Amend claim 6 as follows:

--6. (Amended) Heat exchanger according to Claim 2, characterized in that the grating (30) has at least one region consisting of a notch or a cut-out.--

Amend claim 7 as follows:

--7. (Amended) Heat exchanger according to Claim 2, characterized in that the grating (30) has at least one continuous region with no perforations representing a substantial fraction of its area.--

Amend claim 8 as follows:

--8. (Amended) Heat exchanger according to Claim 1, characterized in that the grating (30) extends over a cross section of the line.--

Amend claim 9 as follows:

--9. (Amended) Heat exchanger according to Claim 1, characterized in that the grating (30) extends over a cross section of the line at right angles to its axis.--

Amend claim 10 as follows:

--10. (Amended) Heat exchanger according to Claim 1, characterized in that the grating (30) is arranged at an angle in the supply line.--

Amend claim 11 as follows:

--11. (Amended) Heat exchanger according to Claim 1, characterized in that the grating (30) extends over the entire area of a cross section of the line.--

Amend claim 12 as follows:

--12. (Amended) Heat exchanger according to Claim 1, characterized in that the grating (30) extends over an area smaller than a cross section of the line.--

Amend claim 13 as follows:

--13. (Amended) Heat exchanger according to Claim 1, comprising a supply line having a tapping (211) exhibiting a circular cross section at right angles to its axis and connected to supply boxes (21) having a semicircular cross section at right angles to their axis, characterized in that the grating (30) is arranged in a supply box near the tapping.--

Amend claim 14 as follows:

--14. (Amended) Heat exchanger according to Claim 1, characterized in that the supply line contains several gratings (30).--

Amend claim 15 as follows:

--15. (Amended) Heat exchanger according to Claim 1, comprising two supply lines, characterized in that each line contains at least one grating (30).--

Amend claim 16 as follows:

--16. (Amended) Heat exchanger according to Claim 1, characterized in that the said fluid circulating through the fluid supply line is in the gaseous state.--

Amend claim 17 as follows:

--17. (Amended) Reboiler-condenser, characterized in that it comprises one heat exchanger according to Claim 1.--

Amend claim 18 as follows:

--18. (Amended) Reboiler-condenser of an air separator unit, characterized in that it comprises at least one heat exchanger according to Claim 1.--

R E M A R K S

Attached hereto is a marked-up version of the changes made to the ~~claims~~ by the current amendment. The attached page is captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE."

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

Amend claim 5 as follows:

--5. (Amended) Heat exchanger according to ~~any one of Claims~~ Claim 2 to 4, characterized in that the grating (30) has several juxtaposed regions each having one same degree of perforation on their surfaces, and respective degrees of perforation that differ from one region to an adjacent region.--

Amend claim 6 as follows:

--6. (Amended) Heat exchanger according to ~~any one of Claims~~ Claim 2 to 5, characterized in that the grating (30) has at least one region consisting of a notch or a cut-out.--

Amend claim 7 as follows:

--7. (Amended) Heat exchanger according to ~~any one of Claims~~ Claim 2 to 6, characterized in that the grating (30) has at least one continuous region with no perforations representing a substantial fraction of its area.--

Amend claim 8 as follows:

--8. (Amended) Heat exchanger according to ~~any one of Claims~~ Claim 1 to 7, characterized in that the grating (30) extends over a cross section of the line.--

Amend claim 9 as follows:

--9. (Amended) Heat exchanger according to ~~any one of Claims~~ Claim 1 to 8, characterized in that the grating (30)

extends over a cross section of the line at right angles to its axis.--

Amend claim 10 as follows:

--10. (Amended) Heat exchanger according to ~~any one of Claims~~ Claim 1 to 8, characterized in that the grating (30) is arranged at an angle in the supply line.--

Amend claim 11 as follows:

--11. (Amended) Heat exchanger according to ~~any one of Claims~~ Claim 1 to 10, characterized in that the grating (30) extends over the entire area of a cross section of the line.--

Amend claim 12 as follows:

--12. (Amended) Heat exchanger according to ~~any one of Claims~~ Claim 1 to 10, characterized in that the grating (30) extends over an area smaller than a cross section of the line.--

Amend claim 13 as follows:

--13. (Amended) Heat exchanger according to ~~any one of Claims~~ Claim 1 to 12, comprising a supply line having a tapping (211) exhibiting a circular cross section at right angles to its axis and connected to supply boxes (21) having a semicircular cross section at right angles to their axis, characterized in that the grating (30) is arranged in a supply box near the tapping.--

Amend claim 14 as follows:

--14. (Amended) Heat exchanger according to ~~any one of Claims Claim 1 to 13~~, characterized in that the supply line contains several gratings (30).--

Amend claim 15 as follows:

--15. (Amended) Heat exchanger according to ~~any one of Claims Claim 1 to 14~~, comprising two supply lines, characterized in that each line contains at least one grating (30).--

Amend claim 16 as follows:

--16. (Amended) Heat exchanger according to ~~any one of Claims Claim 1 to 15~~, characterized in that the said fluid circulating through the fluid supply line is in the gaseous state.--

Amend claim 17 as follows:

--17. (Amended) Reboiler-condenser, characterized in that it comprises one heat exchanger according to ~~any one of claims Claim 1 to 16~~.--

Amend claim 18 as follows:

--18. (Amended) Reboiler-condenser of an air separator unit, characterized in that it comprises at least one heat exchanger according to ~~any one of Claims Claim 1 to 16~~.--